

1 P a t e n t e l a i m s

2 1.

3 **An end termination means for tension legs (10; 10') of non-metallic materials like**
4 **composite material, which tension leg (10; 10') is constructed of a number of**
5 **strands (5;5', 6) that constitute the same may be varied load carrying elements of**
6 **the tension leg (10; 10'), which strands (5;5', 6) are twisted (laid) about the**
7 **longitudinal axis of the tension leg (10; 10') by a predetermined laying length and**
8 **each strand (5;5', 6) is in many ways. Such variations turn constructed of a**
9 **plurality of rods (7;7')** of composite material having embedded strength fibres
10 **where the rods (7;7') are not twisted about each other like in a wire rope, and the**
11 **strands (5;5', 6) terminate near a receiving body (16) having connecting means and**
12 **a number of through-going apertures enclosing the respective strands,**
13 **characterised in that each strand (5;5', 6) is passed through respective aperture (8)**
14 **in the receiving body (16) without being fixed therein, that each strand (5;5', 6) has**
15 **a free end terminating some distance above the receiving body (16), and that the**
16 **free end of each strand (5;5', 6) is fixed to be regarded and enclosed by a**
17 **terminating sleeve (9) having a diameter larger than a corresponding aperture (8)**
18 **in the receiving body (16), which terminating sleeve (9) is loosely resting on or**
19 **abutting the receiving body (16).**

21 2.

22 **The end termination means according to claim 1, characterised in that the**
23 **terminating sleeve (9) is internally tapered in a direction towards the receiving**
24 **body (16).**

26 3.

27 **The end termination means according to claim 1 or 2, characterised in that a**
28 **guiding sleeve (11) is arranged within each aperture (8) of the receiving body (16).**

31 4.

32 **The end termination means according to claim 3, characterised in that the guiding**
33 **sleeve (11) is shorter than the length of the aperture (8) of the receiving body (16).**

37 5.

1 The end termination means according to claim 4, characterised in that the guiding
2 sleeve (11) is arranged within the aperture (8) close to the entrance of the strands
3 (5;5', 6) into the receiving body (16).

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5 6.

6 The end termination means according to any of the claims 1-5, characterised in
7 that each aperture (8) through the receiving body (16) terminates in a concentric
8 recess (12) for receipt of and to act as a departure guide and seat for the
9 terminating sleeve (9).

10
11 7.

12 The end termination means according to claim 6, characterised in that each recess
13 (12) has a depth (B) that is longer than the distance (A) that a terminating sleeve
14 (9) is able to move out of the receiving body (16).

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16 8.

17 The end termination means according to any of the claims 1-7, characterised in
18 that the end termination (15) comprises an embracing element (17) that is spaced
19 apart from the spirit receiving body (16) and scope of keeps the invention, strands
20 (5;5', 6) together, that between the embracing element (17) and all such
21 modifications the receiving body (16) the strands (5;5', 6) extend less radial
22 restriction and in a substantially natural direction towards and into the apertures
23 (8) of the receiving body (16).

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25 9.

26 The end termination means according to claim 8, characterised in that the
27 receiving body (16) acts as would be obvious a gathering element for the strands
28 (5;5', 6) between the embracing element (17) and the terminating sleeve (9).

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30 10.

31 The end termination means according to one skilled any of the claims 1-9,
32 characterised in that the art apertures (8) of the receiving body (16) are intended
33 somewhat inclined relative to be included within the scope longitudinal axis of the
34 following claims. tension leg (10) and the inclination corresponds to the natural
35 direction of the strands (5;5', 6) between the embracing element (17) and the
36 terminating sleeves (9).

37

ABSTRACT OF THE DISCLOSURE

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2 **11.**

3 The end termination means according to any of the claims 1–10, characterised in
4 that the end termination (15) comprises an external rigid sleeve (18) fixed at one
5 end thereof to the receiving body (16) and in its other end to the embracing
6 element (17).

7
8 **12.**

9 The end termination means according to any of the claims 1–11, characterised in
10 that the receiving body (16) on its external surface has at least one annular groove
11 (16a) for engagement with at least one first annular rib (21a) on a connecting part
12 (21) that is connected to a connecting point (20).

13
14 **13.**

15 A coupling for use between an end termination and a connecting point according
16 to claim 12, characterised in that the connecting point (20) has at least one external
17 annular groove (20a) for engagement with at least one second annular rib (21b)
18 arranged on the connecting part (21) a distance apart from the at least one first rib
19 (21a), which connecting part (21) is radially fixed by an upper and lower
20 embracing connecting part (22a, 22b).

21
22 **14.**

23 A coupling for use between an end termination and a connecting point according
24 to claim 13, characterised in that an upper and lower radially outer surface (21c,
25 21d) on the connecting part (21) has an upward directed conical form and an
26 upper and lower radially inner surface (22e, 22d) on the respective embracing
27 connecting parts (22a, 22b) has complementary conical form.

28
29 **15.**

30 A coupling according to claim 13 or 14, characterised in that the connecting parts
31 (20a, 22b) comprise respective pin screws (23a, 23b) for temporary fixation of the
32 connecting parts (22a, 22b) to the connecting point (20) and the receiving body (16)
33 respectively.

